

Amendments to the Claims:

Claims 1 – 9 (Canceled).

10. (Currently amended): A DNA fragment comprising a nucleic acid according to ~~claims 1-9~~, claim 33.

11. (Currently amended): ~~Recombinant~~ A recombinant DNA molecule comprising a nucleic acid according to ~~claims 1-9 or a DNA fragment according to claim 10~~, claim 33 under the control of a functionally linked promoter.

12. (Currently amended): ~~Live~~ A live recombinant carrier comprising a nucleic acid according to ~~claims 1-9, a DNA fragment according to claim 10 or a recombinant DNA molecule according to claim 11~~, claim 33.

13. (Currently amended): ~~Host~~ A host cell comprising a nucleic acid according to ~~claims 1-9, a DNA fragment according to claim 10, a recombinant DNA molecule according to claim 11 or a live recombinant carrier according to claim 12~~, claim 33.

Claims 14 - 24 (Canceled).

25. (Currently amended). ~~Vaccine~~ A vaccine for combating *Lawsonia intracellularis* infections, ~~characterised in that it comprises a~~ comprising at least one nucleic acid according to ~~claims 1-9, a DNA fragment according to claim 10, a recombinant DNA molecule according to claim 11, a live recombinant carrier according to claim 12, a host cell according to claim 13 or a protein according to claims 14-22~~ claim 33, and a pharmaceutically acceptable carrier.

26. (Currently amended): ~~Vaccine~~ The vaccine according to claim 25, ~~characterised in that it comprises~~ comprising an adjuvant.

27. (Currently amended): ~~Vaccine~~ The vaccine according to claim 25 ~~or 26, characterised in that it comprises~~ comprising an additional antigen derived from a virus or micro-organism pathogenic to pigs or genetic information encoding said antigen.

28. (Currently amended): ~~Vaccine~~ The vaccine according to claim 27, ~~characterised in that~~ wherein said virus or micro-organism pathogenic to pigs is selected from the group consisting of Pseudorabies virus, Porcine influenza virus, Porcine parvo virus, Transmissible gastro-enteritis virus, Rotavirus, *Escherichia coli*, *Erysipelothrix rhusiopathiae*, *Bordetella bronchiseptica*, *Salmonella choleraesuis*, *Haemophilus parasuis*, *Pasteurella multocida*, *Streptococcus suis*, *Mycoplasma hyopneumoniae*, *Brachyspira hyodysenteriae* and *Actinobacillus pleuropneumoniae*.

29. (Currently amended): ~~Vaccine~~ A vaccine for combating *Lawsonia intracellularis* infections, ~~characterised in that it comprises~~ comprising antibodies against a protein according to ~~claims 14-22, claim 34.~~

Claims 30 (Canceled).

31. (Currently amended): Diagnostic test for the detection of antibodies against *Lawsonia intracellularis*, ~~characterised in that~~ wherein said test comprises a protein or a fragment thereof as defined in ~~claim 14-22, claim 34.~~

32. **(Currently amended)**: Diagnostic test for the detection of antigenic material of *Lawsonia intracellularis*, ~~characterised in that~~ wherein said test comprises antibodies against a protein or a fragment thereof as defined in ~~claim 14-22~~. claim 34.

33. **(New)**: An isolated nucleic acid encoding an immunogenic *Lawsonia intracellularis* protein that hybridizes under stringent conditions with a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, and SEQ ID NO: 17.

34. **(New)**: An isolated *Lawsonia intracellularis* protein, or an immunogenic fragment thereof, having the same immunological characteristics as an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16, and SEQ ID NO: 18.

35. **(New)**: A vaccine for combating *Lawsonia intracellularis* infection, comprising at least one protein according to claim 34, and a pharmaceutically acceptable carrier.

36. **(New)**: The isolated nucleic acid of claim 33, selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, and SEQ ID NO: 17.

37. **(New)**: The isolated protein of claim 34, selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 18, and immunogenic fragments thereof.

38. (New): A vaccine for combating *Lawonia intracellularis* infection, comprising at least one protein according to claim 37, and a pharmaceutically acceptable carrier.

39. (New): The vaccine according to claim 38, comprising at least one protein selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 12 and SEQ ID NO: 16.